

BEST AVAILABLE COPY

PATENT ABSTRACTS OF JAPAN

Docket # 4858/pct
Inv.: T. Fujikawa et al.

7, 11, 5K

(11)Publication number : 04-002120
(43)Date of publication of application : 07.01.1992

(51)Int.Cl. H01L 21/266

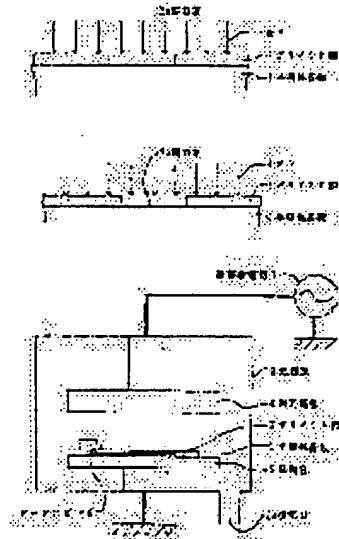
(21)Application number : 02-104067 (71)Applicant : FUJITSU LTD
(22)Date of filing : 18.04.1990 (72)Inventor : TOGASHI MITSUHIRO
MOMOSE TAKAAKI

(54) MANUFACTURE OF SEMICONDUCTOR DEVICE

(57)Abstract:

PURPOSE: To prevent trouble breaking a semiconductor element by changing a mask material in an ion implantation process into polyimide and discharging charges generated in polyimide during the ion implantation process by previously executing RF treatment.

CONSTITUTION: The surface of a semiconductor substrate 1 is coated with polyimide to form a polyimide film 2. The semiconductor substrate 1, on which the polyimide film 2 is formed, is placed onto a base plate 5 in a treating chamber 3, and the polyimide film 2 is treated by using an RF treater applying high-frequency voltage to a counter electrode 4 by a high-frequency power supply 7 and generating plasma. Ions are implanted to the surface of the semiconductor substrate 1 while ions are also implanted to the polyimide film 2, but charges generated in the polyimide film by ion implantation are passed through a layer being formed by RF treatment and having high carbon content, and discharged to the base plate 5 of the semiconductor substrate through a clamp pin 6 fixing the semiconductor substrate 1. Accordingly, the breakdown of the gate oxide film of the semiconductor substrate 1 by charges stored in the polyimide film 2 is prevented.



LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision]

USPS EXPRESS MAIL
EV 511 024 616 US
MARCH 18 2005

of rejection]

[Date of requesting appeal against examiner's
decision of rejection]

[Date of extinction of right]

Copyright (C); 1998,2003 Japan Patent Office